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TWO NEW MALAYSIAN ACRIDIDAE (ORTHOPTERA)

By N. C. E. Miller, F.R.E.S., F.Z.S.

The two new species described in the present paper are from the Selangor Museum, Kuala Lumpur, F.M.S., and were handed to me by Mr. H. M. Pendlebury, the Curator.

Both have been deposited in the collection of the British Museum (Natural History) London.

I am indebted to Dr. B. P. Uvarov of the Imperial Institute of Entomology, London, and to Dr. C. Willemse, Eygelshoven, Holland, for their preliminary examination of the species.

Parastenocrobylus Willemse, 1922.

(= *Pseudocoptacra* Willemse, 1930, *Tijds. Ent.* **73** : 159).

Parastenocrobylus macilentus sp. n. fig. 1.

Brownish olivaceous. Eyes dark castaneous. Elytra with somewhat diffused brown maculation. Wings faintly reddish basally, faintly infumate in outer area and with some infumate suffusion apically. Spines on posterior tibiae black apically; inner surface of posterior tibiae black basally. Antennae longer than head and pronotum together and feebly dorso-ventrally compressed in apical third. Eyes moderately prominent, regularly ovate; interocular distance equal to half the width of frontal ridge between antennae; frontal ridge in profile almost straight; from the front deeply sulcate below antennae to

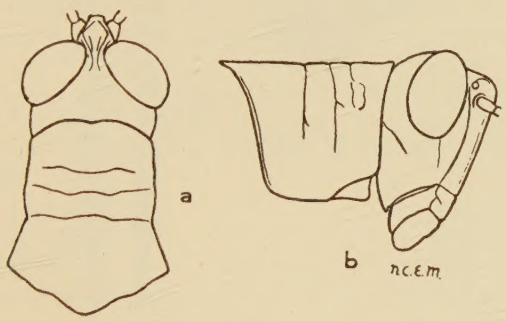

Fig. 1.—*Parastenocrobylus macilentus* sp. n. a. head and pronotum from above; b. the same from the side.

clypeal suture; margins parallel between antennae thence irregularly sinuate to clypeal suture; lateral facial carinae arcuate; surface of face and lower half of genae rugose punctate, rest of head smooth with scattered punctures; fastigium of vertex triangular with the sides feebly rounded and the surface impressed and punctate. Anterior margin of pronotal disc broadly rounded with a feeble median incision; posterior margin obtuse angulate with the sides feebly sinuate; anterior and posterior margins of lateral lobes almost straight; lower margins obtuse angulate with the anterior half concave; disc intersected by three transverse sulci, the third just beyond the middle and the second and third extending to lateral lobes; surface of pronotum rugose punctate. Prosternal spine conical, rounded apically. Inner margins of mesosternal lobes straight and separated

by about half the width of a lobe. Inner margins of metasternal lobes rounded and narrowly separated. Surface of pleura rugose punctate. Elytra narrow and rounded apically, reaching beyond the apex of posterior femora by about a sixth of their length.

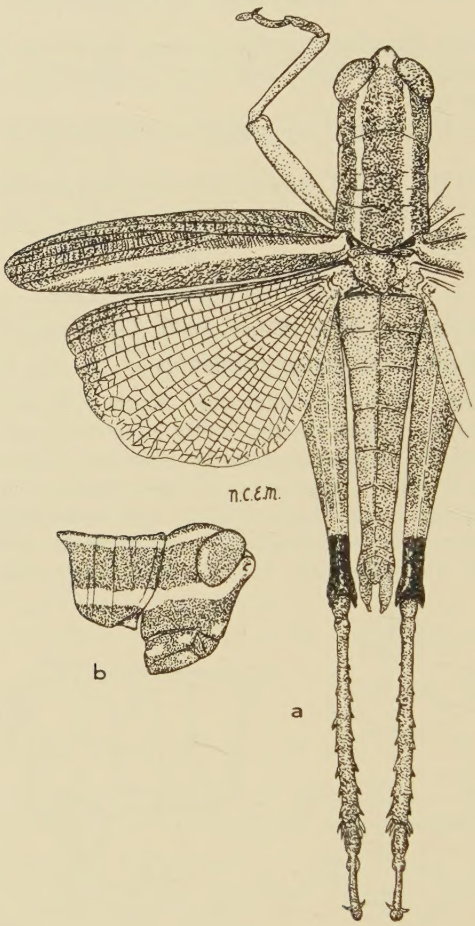

Fig. 2.—*Coloracris rubescens* sp. n. a. from above; b. head and pronotum from the side.

Wings moderately narrow. Posterior tibiae with eleven spines including an apical spine on inner margin and ten spines on outer margin.

Total length	46·00 mm.
Pronotum	7·50 mm.
Elytra	33·00 mm.
Posterior femora	22·00 mm.

Described from 1 ♀ Wang Tangga, Perlis, 18.iii.1936, *H.M. Pendlebury*.

Dr. Willemse, who compared this species with the type of *Parastenocrobylus borneensis* Will. (= *Pseudocoptacra mjöbergi* Will.), states that it differs in the length of the body, the reddish colour of the wings, the absence of black spots

from the pronotal disc and from the outer carinae of the posterior femora. It is also more slender. *P. borneensis* has been recorded from Borneo, Sumatra and Java.

Coloracris rubescens sp. n. fig. 2.

Antennae missing. Eyes castaneous. Head black with two small spots in middle of face, two large spots close to clypeal suture, a spot at basal external angle of labrum, two spots on mandibles, a stripe from the base of antennae along anterior and lower margin of eyes coinciding with a sub-median transverse stripe on lateral lobes, fastigium of vertex and a stripe along inner margin of eyes and along disc of pronotum laterally, ochreous; pleura black with a median transverse ochreous stripe. Abdomen piceous with ochreous suffusion basally dorsally, the lateral margins and posterior margins of dorsal segments narrowly ochreous. Anterior and median legs and posterior femora (except knee) dark reddish ochreous; posterior femora with the knee black and with a faint reddish ochreous suffusion sub-apically; posterior tibiae piceous with the spines black. Elytra brown with a sub-median longitudinal pale ochreous stripe. Wings pale reddish with the outer margin infumate.

Eyes sub-prominent; interocular distance slightly wider than frontal ridge between antennae; frontal ridge in profile straight; from the front narrow, margins sub-parallel between antennae, thence obsolete; fastigio-facial angle broadly rounded; fastigium of vertex from above broadly rounded with a small shallow depression near apex; surface of head rugose punctate except for an area behind eyes smooth and almost devoid of punctures. Anterior margin of pronotal disc broadly, posterior margin narrowly rounded; anterior margins of lateral lobes feebly rounded, posterior margins straight, lower margins broadly angulate with the angle rounded and the anterior half concave; disc intersected by three transverse sulci, the second at the middle; surface of pronotum and pleura rugose-punctate. Prosternal spine inclined forwards, slender, acute apically. Inner margins of mesosternal lobes rounded or feebly angulate and separated by about half the width of a lobe; inner margins of metasternal lobes contiguous. Oblique ridges on posterior femora regular; posterior tibiae with nine spines including an apical spine on inner margin, six spines on outer margin. Elytra with the costal and inner margins feebly rounded, sub-parallel, and with the apex rounded. Wings with the outer margin broadly rounded and undulate.

Total length	31·00 mm.
Pronotum	6·00 mm.
Elytra	18·00 mm.
Posterior femora	17·00 mm.

Described from 1 ♀ (type). Trusan, Borneo, Sarawak, i.1915, *H. W. Smith.*

This species differs from the genotype *C. coerulescens* from Borneo, Sarawak, in the coloration of the wings and of the anterior and median legs, which are blue and olivaceous respectively in *coerulescens*.

ON SOME APTERYGOTA FROM NEW GUINEA AND THE NEW HEBRIDES

By H. Womersley, F.R.E.S., A.L.S.
(*Entomologist, South Australian Museum.*)

The material dealt with in the present paper is largely the result of the several expeditions made to the New Hebrides, Papua and Dutch New Guinea, by Miss L. E. Cheesman. In addition, several species are recorded from specimens collected in the New Hebrides by Dr. J. R. Baker and in New Britain by Mr. J. L. Froggatt. With the exception of Mr. Froggatt's material it was all sent to me for study by Miss Cheesman through the kindness of Mr. McKenny Hughes, of the Department of Entomology, British Museum. Paratypes and representative specimens will be kept at the South Australian Museum, but types and other material will be forwarded to the British Museum.

To the three collectors I offer my sincere thanks for the opportunity afforded for studying this group of insects, which is so very little known from these islands.

No discussion is attempted here of the distribution of the Collembola fauna of Australia, as this will be done in a forthcoming publication.

The following species are represented in the collection :—

Collembola.

Pseudachorutes dahlii Schaeffer.
Achorutes rosaceus Schött.
Entomobrya varia Schött.
Entomobrya proxima Fols.
Sira jacobsoni Börner.
Lepidocyrtus parvidentatus Schaeffer.
Mesira australica (Schött).
Mesira calolepis Börner.
Mesira picta (Schaeffer).
Lepidocyrtoides striatus Schött.
Lepidocyrtoides cheesmani sp. n.
Lepidocyrtoides cheesmani var. *fasciata* var. n.
Salina insignis Hnds.
Paronella cheesmani sp. n.
Paronella dahlii Schaeffer.
Pseudoparonella papuanus sp. n.

Thysanura.

Lepismatidae.

Ctenolepisma longicaudata Esch.
Trinemura novae-caledoniae Silv.

Machilidae.

Meinertellus jacobsoni Silv.
Machilontus javanicus Silv.
Machiloides novae-guinae sp. n.

Collembola.

Arthropleona.

Poduroidea.

HYPOGASTRURIDAE.

Pseudachorutes Tullberg, 1871.

Pseudachorutes dahlii (Schaeffer, 1898).

Schottella dahlii Schaeffer, 1898.

A single specimen from the Cyclops Mts., Dutch New Guinea, collected by Miss Cheesman at 2000 feet and 3 miles inland, 1936. This species was originally described from Ralum and Kabakaul in New Britain.

Achorutes Templeton, 1835.

Achorutes rosaceus Schött, 1917.

About 10 specimens of this species, which is very widely distributed in Australia, were collected at Malekula, Ounua, New Hebrides, in February 1929.*

Entomobryoidea.

ENTOMOBRYIDAE.

Entomobrya Rondani, 1861.

Entomobrya varia Schött, 1917.

A number of specimens of this species, which is widely distributed in Australia, were sent to me by Mr. J. L. Froggatt, Government Entomologist, who collected them from *Acalypha* foliage at Rabaul, New Britain, and Mandated Territory of Papua, in March 1937.

Entomobrya proxima Fols., 1924.

Locality. Five specimens from the Cyclops Mts., Dutch New Guinea, at 2000 feet and 3 miles inland, 1936. Originally described by Folsom from Sumatra and recorded later (1928) from Java by Handschin.

Sira Lubbock, 1869.

Sira jacobsoni Börner, 1913.

Sira tricincta Schött, 1917.

Locality. Four specimens from the Cyclops Mts., Dutch New Guinea, at 2000 feet and 3 miles inland.

Remarks. There seems little doubt that Schött's *S. tricincta* from North Queensland is identical with *jacobsoni* of Börner from Java. A variety from India, var. *indica* Handschin, has also been described. It is evidently a very variable species, and in two of the specimens collected by Miss Cheesman, which were apparently immature, only lateral pigmentation was present on the meso- and metathorax.

Mesira Scherbakow.

Mesira calolepis Börner, 1913.

Locality. Two specimens from amongst dead leaves on Mt. Nomo, Djapo Mts., Dutch New Guinea, at 1500 feet, 1936. Both specimens are of the practically pigmentless form described by Handschin (1925) from Java.

* Unless otherwise stated, all material was collected by Miss Cheesman.

Mesira australica (Schött, 1917).

Lepidosira australica Schött, 1917.

Locality. Kokoda, Papua, in Rain Forest at 1300 feet by beating, 28th August, 1933; Oquali, Papua (Owen Stanley Range), at 3500 feet by beating in Rain Forest, 1933.

Mesira picta (Schaeffer, 1898).

Lepidocyrtus pictus Schaeffer, 1898.

Locality. Mt. Nomo, Djapo Mts., at 1500 feet (1); Cyclops Mts., Dutch New Guinea, at 2000 feet and 3 miles inland (1).

Remarks. Both the above specimens were even lighter in colour than the light form described by Schött, lacking the cross bands on abdominal segments II, III, and IV, except at the apex of IV.

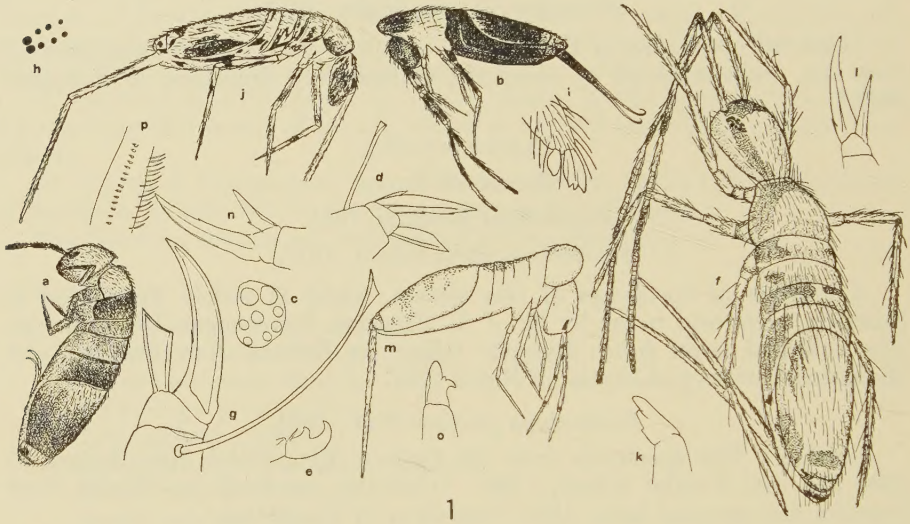

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Fig. 1.—*a. Entomobrya proxima* Fols., entire lateral view; *b–e. Lepidocyrtoides cheesmani* sp. n.; *b.* lateral view; *c.* ocelli; *d.* tip of tibiotarsus and claw; *e.* mucro; *f–i. Salina insignis* Hands.; *f.* entire animal; *g.* tip of tibiotarsus and claw; *h.* ocelli; *i.* tip of dens and mucro; *j–l. Paronella cheesmani* sp. n.; *j.* entire animal; *k.* mucro; *l.* claws; *m–p. Pseudoparonella papuanus* sp. n.; *m.* entire animal; *n.* claws; *o.* mucro; *p.* dental spines.

Lepidocyrtus Schaeffer.

Lepidocyrtus parvidentatus Schaeffer, 1898.

Locality. Three specimens from amongst dead leaves on Mt. Nomo, Djapo Mts., Dutch New Guinea, at 1500 feet, 1936.

Lepidocyrtoides Schött.

Lepidocyrtoides striatus Schött.

Locality. Three specimens of typical colouration from coll. 377 and 379, Oquali (Owen Stanley Range), Papua, in Rain Forest, at 3500 feet by beating. Two specimens of a rather lighter pigmentation from Mt. Nomo, Djapo Mts., Dutch New Guinea, at 1500 feet, 1936.

Lepidocyrtoides cheesmani sp. n. (fig. 1 *b–e*).

Description. Length of body, excluding head, 2·55 mm. Antennae almost as long as body excluding head. Eyes 8 on each side on dark fields. Ratio of head : thorax I : II : abdomen I : II : III : IV : V : VI = 3 : $3\frac{3}{4}$: $1\frac{1}{6}$: $\frac{4}{5}$: $1\frac{1}{5}$: 1 : $6\frac{2}{3}$: $1\frac{1}{3}$: $\frac{1}{2}$. Ratio of antennal segment = $3\frac{1}{2}$: $3\frac{3}{4}$: 3; 6, IV with apical knob and without annulations. Furca long, reaching ventral tube, ratio of manubrium to mucrodens = 5 : 6, unannulated portion of dentes more than twice as long as mucro, mucro bidentate with basal spine. Legs long, claws with a pair of proximal basal teeth, two distal inner teeth and a strong outer lateral basal tooth; empodial appendage apically truncate, reaching first distal inner tooth of claw. Scales elongate, apically obtuse and apparently without striations, brownish. Mesothorax strongly overlapping head as in *L. striatus*. Colour light yellowish with deep blue-black pigment on head, thorax II and on abdomen II, III and apex of IV; antennae and legs with similar pigmentation except at tips of segments; manubrium also lightly pigmented.

Locality. Several specimens from coll. 363, Kokoda, Papua, at 1300 feet in Rain Forest by beating, 1936.

Remarks. This striking insect differs from the hitherto known species of the genus in having much longer antennae, two distal teeth to the claws, in the truncate empodial appendage and in the colouration.

L. cheesmani var. **fasciatus** var. n.

Differs from the foregoing in the absence of the pigmentation on the head, thorax and abdomen V and VI.

Locality. Three specimens from Oquali, Papua (Owen Stanley Range), at 3500 feet in Rain Forest by beating, 1933.

Salina Macgillivray.

Salina insignis Handschin, 1928 (fig. 1 *f–i*).

Locality. This very striking form was collected from *Acalypha* foliage at Rabaul, New Britain, by the Government Entomologist, Mr. J. L. Froggatt, in January 1937. Described originally from Java.

Paronella Schött.

Paronella dahlii Schaeffer, 1898.

Locality. Two specimens from Mt. Nomo, Djapo Mts., Dutch New Guinea, from amongst dead leaves at 1500 feet, 1936.

P. dahlii var. *tamarensis* Schött, 1901.

Locality. One specimen from the Cyclops Mts., Dutch New Guinea, at 2000 feet and 3 miles inland, 1936.

Paronella cheesmani sp. n. (fig. 1 *j–l*).

Description. Length of body 4·7 mm. Antennae damaged, only segment I present, this 1·2 mm. long. Eyes 8 on each side, on dark patches. Ratio of head : thorax II : III : abdomen I : II : III : IV : V : VI = 25 : 22 : 13 : 6 : 8 : 10 : 62 : 10 : 4. Legs long and slender, claw with distal inner tooth and outer lateral basal tooth; empodial appendage lanceolate, almost reaching distal tooth of claw, spathulate tibiotarsal seta apparently lost.

Furca long and reaching past ventral tube, 2·4 mm. long, ratio of manubrium to mucrodens, = 50 : 70, mucro with three teeth. Colour yellowish with dark blue markings as figured. Clothing of sparse hairs and the usual scales.

Locality. A single specimen from amongst dead leaves from Mt. Nomo, Djapo Mts., Dutch New Guinea, at 1500 feet, 1936.

Remarks. In markings this species resembles *Pseudoparonella appendiculata* Schött, from Queensland, but differs in the length of the antennae and the shape of the empodial appendage, as well as in the generic characters of the mucro.

Pseudoparonella Handschin.

Bromacanthus Schött, 1925, syn.

Pseudoparonella papuanus sp. n. (fig. 1 *m–p*).

Description. Length of body 3·0 mm. Antennae twice length of head, ratio of segments = 4 : 8 : 7·5 : 10. Head about twice the length of mesothorax. Eyes 8 on each side, on dark patches. Legs not unduly long, claws with two distal inner teeth but no outer lateral basal tooth; empodial appendage as figured. Furca long and reaching ventral tube, manubrium and mucrodens subequal, mucro with three teeth, a large blunt apical tooth, a large upturned mediobasal tooth, and a very small tooth between these; dens with a single inner and outer row of spines, which are very small but distinctly tridentate. Colour entirely yellowish except for the dark eye-patches and the black tips to the antennal segments. The scales are typical of the Paronellini and give the insect a brownish appearance; otherwise the clothing is of sparse fine hairs.

Locality. One specimen from Oquali, Papua (Owen Stanley Range), by beating Rain Forest at 3500 feet, 1933.

Remarks. In the form of the mucro and the tridentate dental spines this species is very close to *Bromacanthus handschini* Schött from Sarawak. It differs from typical *P. nigrofasciatus* Hands. from Java in the lack of pigmentation and the smaller dental spines (cf. fig. 1).

Thysanura.

Lepismatidae.

Ctenolepisma Esch., 1905.

Ctenolepisma longicaudata Esch., 1905.

Locality. Two specimens from Erromanga, New Hebrides, in 1930.

Trinemura Silv., 1908.

Trinemura novae-caledoniae Silv., 1914.

Locality. A single specimen from West Santo, New Hebrides, collected by Dr. J. R. Baker at 4000 feet, May 1933. The species has hitherto been known only from the original locality of New Caledonia.

Machilidae.

Meinertellus Silv., 1912.

Meinertellus jacobsoni Silv., 1910.

Locality. Five specimens, including both sexes, from Papua, Kokoda, 1933, at 1300 ft. In dead leaves. The species was originally described from the Island of Krakatau.

Machilontus Silv.

Machilontus javanicus Silv., 1912.

Locality. One specimen from amongst dead leaves on Mt. Nomo, Djapo Mts., Dutch New Guinea, at 1500 feet, 1936; another, a female, from Papua at 600–1500 feet, 1936. The species was originally described from Java.

Fig. 2.—*Machiloides novae-guinae* sp. n. *a.* Eyes, front view ♂; *b.* side view, ditto; *c.* basal segments of maxillary palpi ♂; *d.* distal segments, ditto; *e.* specialised setae on segment II of maxillary palpi ♂; *f.* maxillary lacinia and galea of male; *g.* labial palpi ♀; *h.* mandible ♂; *i.* leg I ♂; *j.* leg III ♂.

Machiloides Silv.

Machiloides novae-guinae sp. n. (fig. 2 *a–j*).

Description. Length to 7·0 mm. Colour, in spirit, dark brownish; denuded of scales, straw coloured; eyes with two to three iridescent bands. Antennae thin, longer than body; basal segments 2½ times as long as broad, distal segments with 18–20 subdivisions, the apical subdivisions brownish. Eyes large, rounded as figured, slightly separated medially; paired ocelli somewhat pear-shaped (cf. fig. 2*a*). Labial palpi of female as shown. Maxillary palpi with the usual two bulbous processes and one triangular process on segment I, II as figured with a large curved subapical lobe, below which are three transverse rows of stout short black rods arranged in rows of 6–8, on the opposite shoulder with some stout long pointed setae, and below these with a cluster of short stout, more or less pointed black setae extending for almost the whole length of the segment (cf. fig. 2 *c*); ratio of segments of maxillary palpi = 26 : 32 : 40 : 35 : 57 : 36 : 53, last two segments outwardly with scale-like setae; lacinia and galea subequal. Mandibles as figured with 4 apical teeth and a well-developed molar area. Thorax moderately arched. Legs normal, II and III with well-developed stylets. Abdominal segments with median sclerites practically invisible,

a single pair of exsertile vesicles on I–VIII, and stylets on II–IX; the stylets on II and III are rather laterally compressed and blade-like, rest normal, apical seta of stylet IX only one-third the length of stylet. Median tail appendage and cerci indeterminate, broken.

Male: penis short, gonapophyses absent. Female: ovipositor reaching beyond stylet IX for the length of the stylet.

Locality. Holotype male, coll. 33, Mt. Nomo, south of Mt. Bougainville, Dutch New Guinea, 1936. The female from Papua, 1935; on foliage at the margin of the river.

Remarks. This species is very close to *M. sarasini* Silv. and its variations from New Caledonia. It differs mainly in the form of the paired ocelli and in the outer cluster of sharp pointed black setae on the second segment of the maxillary palpi.

Literature.

Börner, C., 1913, Zur Collembolenfauna Javas. *Tijds. Ent.* **56** : 44–61.

Carpenter, G. H., 1916, The Apterygota of the Seychelles. *Proc. R. Irish Acad.* **33** (B. 1) : 1–70.

Folsom, J. W., 1924, East Indian Collembola. *Bull. Mus. Comp. Zool. Harvard*, **65** : 505.

Handschin, E., 1925, Beiträge zur Collembolenfauna der Südainseln. *Treubia* **6** : 225–270.

Handschin, E., 1926, Ost-Indische Collembolen, III. *Treubia* **8** : 446–461.

Handschin, E., 1928, Collembolen aus Java. *Treubia* **10** : 245–270.

Handschin, E., 1929, Beiträge zur Collembolenfauna von Süd-Indien. *Rev. suisse Zool.* **36** : 229–262.

Handschin, E., 1930, Philippine Collembola, II. *Philipp. J. Sci.* **7** : 411–427.

Imms, A. D., 1912, On some Collembola from India, Burma and Ceylon. *Proc. zool. Soc. Lond.* **1912** : 80–125.

Schaeffer, C., 1898, Die Collembolen des Bismarkarchipels. *Arch. Naturges.* **64** : 393–425.

Schött, H., 1901, Apterygoten von Neu-Guinea und den Sündainseln. *Termes. Füzet.* **24**.

Schött, H., 1917, " Collembola " in Results Swedish Scientific Exped. to Australia, 1910–13. *Ark. Zool.* **11** (8) : 1–60.

Schött, H., 1925, Collembola from Mt. Murud and Mt. Dulit in northern Sarawak. *Sarawak Mus. J.* **3** : 107–127.

Silvestri, F., 1915, Thysanura della Nuova-Caledonia e della Isole Loyalty. *Nova Caledonia (A.) Zool.* **2** : 75–81.

Womersley, H., 1933, A Preliminary Account of the Collembola–Arthropleona of Australia. Part I. Poduroidae. *Trans. Roy. Soc. S. Austr.* **57** : 48–71.

Womersley, H., 1934, A Preliminary Account of the Collembola–Arthropleona of Australia. Part II. Entomobryidae. *Trans. Roy. Soc. S. Austr.* **58** : 86–138.

NEW SPECIES OF CHRYSOMELIDAE (COLEOPT.) FROM THE SOLOMON ISLANDS COLLECTED BY R. A. LEVER

By G. E. Bryant, F.R.E.S.

(*Entomological Assistant, Imperial Institute of Entomology.*)

Key to the species of Damelia (Eumolpinae).

1(4). Prothorax with the surface unequal, rugosely punctured.
2(3). Elytra with tubercles and very irregular punctures . . . . *marshalli* Clk.
3(2). Elytra with feeble traces of tubercles and punctures forming striae *salomonensis* sp. n.
4(1). Prothorax with the surface with well-defined round punctures.
5(8). Elytra irregularly punctured, no trace of carinae.
6(7). Apical third of the elytral suture without pubescence. Colour metallic green . . . . . *metallica* sp. n.
7(6). Apical third of the elytral suture with pubescence. Colour metallic blue. *cyanea* sp. n.
8(5). Elytra with traces of carinae . . . . . *leveri* sp. n.

Eumolpinae.

Damelia salomonensis sp. n.

Ovate, somewhat verrucose and strongly punctured, black with purple reflections, nitid. L. 5 mm.

Head strongly punctured, a small nitid tubercle behind the insertion of the antennae, mouthparts with fine golden pubescence, palpi rufous. Antennae filiform, extending almost to the middle of the elytra, the six basal segments rufous, the five terminal segments fuscous, the two basal more dilated, the second the shortest, about half as long as the third. Prothorax purple-black, much narrower than the base of the elytra, the sides slightly rounded, the anterior angles with a well-defined rounded tubercle, the disc strongly and irregularly punctured and verrucose. Scutellum subtriangular, nitid, impunctate, purple-black. Elytra purple-black, widest at the base, the shoulders prominent, the sides almost parallel, and from behind the middle rounded to the apex, strongly and irregularly punctured and verrucose, a large tubercle at the base, and a deep depression before the middle on each elytron, traces of fine pubescence at the apex. Legs purple-black, clothed with fine pale pubescence, the femora incrassate towards the apex. Underside purple-black, almost impunctate, clothed with fine pubescence, the ventral segments with the second to the fourth almost equal. Female.

Solomon Islands: San Cristobal, Kirakira, 1 specimen, 9.v.1935; Santa Ana, 2 specimens, 1932 (*R. A. Lever*).

Type in the British Museum.

Allied to *D. marshalli* Clk., from Fiji.

Damelia leveri sp. n.

Ovate, bronze-black, the legs, antennae, and the two apical ventral segments of the abdomen rufous, the prothorax and elytra strongly and closely punctiform, the apical half of the elytra with two short carinae. L. 5 mm.

Head bronze-black, rugosely punctured, the labrum and palpi castaneus, slightly impressed between the insertion of the antennae. Antennae rufous, the sixth to the tenth

segments fuscous, extending slightly beyond the middle of the elytra, the first segment more dilated and about twice as long as the second, the third to the fifth more slender, and each longer than the second, the six terminal segments thicker, about equal to each other, tinged with fuscous with the exception of the apical one, which is rufous. Prothorax bronze-black, very strongly and closely punctiform, the sides rounded and contracted in front, the anterior angles prominent. Scutellum bronze-black, subtriangular, with four well-defined punctures on its disc. Elytra bronze-black, strongly and closely punctiform, the punctures forming somewhat irregular rows, the apical half with the fourth and fifth rows slightly carinate, widest at the base, gradually tapering to the apex, the shoulders prominent and impunctate. Legs rufous, the apical half of the femora rugosely punctured, the tibiae clothed with short ashy pubescence. Underside bronze-black, almost impunctate, the ventral segments of the abdomen with the two apical segments strongly impressed and tinged with fuscous, each segment with a row of fine rather long pubescence. Male.

Female differs in having the apex of the elytra produced into a well-defined process which is slightly recurved.

Solomon Islands : Guadalcanal, Bonu, 1200 ft., 13.xii.1934 (*R. A. Lever*) 1 ♂; Guadalcanal, Bonego R., 700 ft., 14.xii.1934 (*R. A. Lever*) 1 ♀; Guadalcanal, Kaukau Estate, 27.viii.1934 (*R. A. Lever*) 1 ♀.

Type in the British Museum.

Distinguished from the other species by the elytra having traces of carinae.

Damelia metallica sp. n.

Ovate, metallic dull green, the legs rufous, antennae fuscous, the prothorax and elytra strongly punctiform, the punctures deep and rounded, the underside metallic green, the abdomen clothed with fine ashy pubescence, the coxae and apical ventral segment of abdomen rufous. L. 5–6 mm.

Head metallic green, strongly punctured, but the punctures not so round and deep as on the prothorax, the labrum rufous, the palpi testaceous, between the insertion of the antennae two impunctate triangular patches. Antennae long and slender, extending to the middle of the elytra, fuscous, with the tip of the terminal segments rufous, the six terminal segments more pubescent than the five basal ones. Prothorax metallic dull green, strongly punctiform, the punctures round and deep, slightly transverse, widest behind the middle, contracted in front, with the anterior angles prominent. Scutellum metallic green, almost impunctate, with only a few fine scattered punctures. Elytra metallic dull green, strongly punctiform, but not quite so strong as those on the prothorax, and forming somewhat irregular rows, the sutural margin forming a smooth carina, the shoulders somewhat prominent and impunctate, the sides almost straight and thence rounded to the apex. Legs rufous, the tibiae and tarsi tinged with fuscous, the apical half of the femora with a few strong punctures. Underside metallic green, the coxae rufous and strongly punctured, the ventral segments of the abdomen clothed with short ashy pubescence, the apical segment tinged with rufous, the fifth and sixth segments strongly notched in the ♂.

Solomon Is. : Ulawa, 18.v.1934, 700 ft. (*R. A. Lever*) 7 specimens; S. Malaita, Suulaha, 7.x.1935 (*R. A. Lever*) 2 specimens.

Type in the British Museum.

Damelia cyanea sp. n.

Ovate, entirely metallic blue, with the exception of the antennae, tibiae and tarsi, tinged with fuscous, punctiform, the punctures on the prothorax closer and more irregular than on the elytra, the apical third of the elytral suture pubescent. L. 5 mm.

Head metallic blue, rugosely punctured, the punctures fewer between the eyes, the labrum

and palpi fulvous. Antennae fuscous, extending to the middle of the elytra, the first segment twice as long as the second and more dilated, the third about as long as the first, the remainder each about equal to the third, the five terminal segments more closely pubescent. Prothorax metallic blue, strongly but irregularly punctured, slightly transverse, the sides rounded and slightly contracted in front, with the anterior angles bluntly produced. Scutellum subtriangular, metallic blue, almost impunctate. Elytra metallic blue, strongly punctured in somewhat irregular rows, widest at its base and thence behind the middle tapering to the apex, impressed at the base behind the shoulders, the apical third of the suture and the apex clothed with ashy pubescence. Legs with the femora metallic blue, tibiae and tarsi less so, tinged with fuscous, and clothed with scattered ashy pubescence.

Solomon Islands: Guadalcanal, iv.1932 (*R. A. Lever*) 3 specimens; Aola (87.3. B.M. coll.) (*C. M. Woodford*) 2 specimens.

Described from 5 ♀♀. Type in the British Museum.

Allied to *D. metallica* Bry., but differs in colour, and in the apical third of the suture of the elytra clothed with pubescence.

Cleoporus salomonensis sp. n.

Shining black, with fulvous markings on the head, median portion of the prothorax, and a complicated pattern on the elytra, the three basal segments of the antennae fulvous, the remainder tinged with fuscous. Head strongly rugose, prothorax longitudinally strigose; elytra strongly and deeply punctured, the interstices longitudinally and transversely raised. L. 5 mm.

Head strongly rugose and strigate, the portion between the eyes fulvous, the clypeus rugose, the preocular sulci deep. Antennae long and slender, the three basal segments fulvous, the remainder tinged with fuscous, the second segment shorter than the first and third. Prothorax very transverse, black, with traces of fulvous on the median portion of the anterior margin, sides rounded and margined, the anterior angles strongly produced, the entire surface covered with strongly raised more or less longitudinal strigae. Scutellum subquadrate, black, with a few punctures. Elytra slightly wider at the base than the prothorax, the shoulders not very prominent, the surface strongly and deeply punctured in somewhat irregular rows, the interstices with broken costae, black, with an elaborate fulvous pattern, a patch at the shoulder, and on one basal costa, two broken lines near the suture on the basal half, a V-shaped mark behind the middle extending to the suture, and a patch on the outer margin near the apex. Legs black, unarmed, the femora strongly punctured, the four posterior tibiae emarginate at the apex, tarsi fulvous, claws bifid. Underside shining black, clothed with very fine scattered pubescence, pronotum broad and strongly punctured, anterior margin of the thoracic episternum convex, the first ventral segment about equal to the following three, all with shallow scattered punctures.

Solomon Is.: Kookoom, Guadalcanal, 1931 (*R. A. Lever*) 2 specimens; Matengo, Guadalcanal, 1931 (*R. A. Lever*) 1 specimen; Langa, Guadalcanal, 1931 (*R. A. Lever*) 1 specimen.

Type in the British Museum.

Allied to *C. ribbei* Jac., but easily distinguished by its pattern, *C. ribbei* being entirely black.

Halticinae.

Nesohaltica leveri sp. n.

Oblong, ivory-yellow, elytra pitch brown, the hind femora and the three apical segments of the antennae tinged with fuscous. L. 2 mm.

Head ivory-yellow, impunctate, a deep impression near the inner margin of each eye, a

small carina between the insertion of the antennae. Antennae extending to about the middle of the elytra, ivory-yellow, with the three apical segments tinged with fuscous, the first segment the longest, nearly twice as long as the second, the first two more dilated than the following, the third to the sixth about equal and more slender, the five apical segments slightly stouter. Prothorax transverse, ivory-yellow, impunctate, the sides margined and nearly straight, the four angles each bearing a fine seta, the anterior angles oblique. Scutellum ivory-yellow, transverse, subtriangular, with the apex rounded, impunctate. Elytra pitch brown, somewhat strongly and confusedly punctured. Underside ivory-yellow, with the ventral segments slightly darker, clothed with scattered golden pubescence, the anterior coxal cavities open behind. Legs ivory-yellow, clothed with short golden pubescence, the hind femora tinged with fulvous, the hind tibiae armed with a short dark spine at the apex.

Solomon Is.: Guadalcanal, Langa, 1.iv.1934, 1 specimen; 4.v.1935, 15 specimens (*R. A. Lever*).

Type in the British Museum.

Allied to *N. nigra* Mlk., from Samoa, but differs in colour and in having the prothorax impunctate.

THE LARVA OF *SINTOR FLORIDUS* JORDAN (COLEOPT. ANTHRIBIDAE)

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The Anthribid larvae previously examined by me have been derived from dead wood or from dried fruits of trees (*Araecerus*); I have not seen any of the species reported to be predacious on Coccidae. Dr. Kalshoven has now sent me larvae of *Sintor floridus* Jordan taken from *living shoots* of *Leea* sp. in Java.

Larva (fig. 1).—Head testaceous, pronotum faintly yellowish, remainder of body white. Body rather abruptly curved downwards, and slightly enlarged, behind the middle; posterior extremity narrower.

Head nearly circular, with numerous short and inconspicuous hairs; frontal and epicranial sutures not distinct; one small ocellus, with black pigment spot, on each side. Antenna borne on the ventral surface of a sclerotised protuberance; very small, with a small cone, borne, with three sensillae, on a nearly circular basal cushion. Labrum transverse, with several marginal setae and two setae on each side in a line across the middle; tormae normal. Epipharynx (fig. 8) with numerous articulated setae on disc. Mandible (fig. 2) with two distinct apical teeth; the molar part angulate distally. Maxillary palp (fig. 3) with three distinct segments, the two basal moderately transverse, the apical longer than wide; mala narrow distally with few not very closely or regularly arranged setae; lacinial projection well developed, spiniform. Labial palp (fig. 3) with two segments, the basal slightly, the apical distinctly, longer than wide; labium not elongate; hypopharynx with a stout seta at the base of each palp and, posteriorly, two groups of numerous granules on each side of a nude space with two pores. Hypopharyngeal sclerome (fig. 3) well developed, but only slightly produced anterior to the hypopharyngeal bracon, the anterior margin wide, angulate laterally and with a small median prominence. Anterior abdominal terga with four subdivisions, of which the second is very attenuated. Eighth abdominal tergum with directly transverse anterior and posterior margins. Legs (fig. 4) well developed, soft, without claw-like structure; each consisting of two free segments borne on a protuberant

FIGS. 1–8.—Larva of *Sintor floridus* Jord. 1, lateral view; 2, mandible; 3, ventral mouth-parts in dorsal view (*hy sc*, hypopharyngeal sclerome; *lp*, labial palp; *sp*, lacinial spine); 4, leg; 5, 6, 7 spiracles of thorax, 1st and 7th abdominal segments respectively; 8, epipharynx (*tor*, tormae).

basal cushion; the first segment about as long as wide; the second distinctly longer than wide and with a partly divided, very small, apical rounded division. Thoracic spiracle (fig. 5) large, elliptical, the greater part of the margin (except ventrally) with contiguous air-chambers which are larger on the posterior margin; the abdominal spiracles (figs. 6, 7) small, broadly oval, with fewer marginal air chambers. Body skin very finely micro-asperate and with numerous short and inconspicuous setae. Length of larva about 8 mm.

Larvae collected from living shoots of *Leea* sp., Java (*Dr. L. G. E. Kalshoven*). Associated beetles were identified by Dr. Karl Jordan.

This larva, with that of *Basitropis hamata* Jord.* would run down to near *Eucorynus crassicornis* F. in my key † to Anthribid larvae. These three species, the only ones I have yet seen in which the spiracles have multiple marginal air-tubes, are separable as follows :—

1. Distal extremity of maxillary mala with an extremely close and regular fringe of setae. Hypopharyngeal sclerome projecting well beyond bracon . . . . . *Basitropis.*
   Distal extremity of maxillary mala with few setae. Hypopharyngeal sclerome projecting slightly beyond bracon . . . . . (2).
2. More than half the perimeter of thoracic spiracle with contiguous air-chambers. Epipharynx with numerous articulated setae on disc . *Sintor.*
   Less than half perimeter of thoracic spiracle with air-chambers. Epipharynx with two pairs of setae along middle; with dense patch of minute skin-points on each side . . . . . *Eucorynus.*

Book Notice.

Procedure in Taxonomy: including a reprint of the International Rules of Zoological Nomenclature with Summaries of Opinions rendered to the present date. By E. T. Schenk and J. H. McMasters. pp. vii + 72. Stanford University Press and London (H. Milford, Oxford University Press), 1936. Price 9*s.*

This book was prepared to supply the student and the professional systematist with a clear-cut and comprehensive statement of the principles of Taxonomy, the International Rules of Zoological Nomenclature, Summaries of Opinions rendered by the International Commission on Zoological Nomenclature on specific points, and a complete index to the Rules and Opinions.

The eight chapters deal with the introduction, systematic categories, types, the description of new species, specific names, synonymy, storage of type material, and Latin terms and abbreviations. An appendix gives the full International Rules of Zoological Nomenclature in their most up to date form, and Summaries of Opinions rendered by the International Commission, Nos. 1 to 123. This last is particularly valuable, since copies of many of the earlier Opinions are no longer obtainable. An index of 16 pages in double column completes the work.

* Gardner, 1937, *Ind. For. Rec.* (*Ent.*) **3** (6).
† Gardner, 1936, *Ind. For. Rec.* (*Ent.*) **2** (2).